Abstract

The present invention relates to a method for the wet chemical preparation of materials libraries consisting of a large number of solids, the solids being deposited from reaction mixtures in microreaction chambers onto a bottom plate which simultaneously serves as the library substrate. Depending on the material selected for the library substrate, the solids can subsequently be examined non-destructively, for example, by reflecting or penetrating microarea X-ray diffraction.

Figure 1: Special embodiment of the reactor as employed in the Example.

Figure 2: Identification of the materials library. The compositions of the individual sample spots are summarized in Table 1.

Figure 3: On the top of this Figure, there is shown the X-ray diffraction diagram of a conventionally prepared TS-1 zeolite as an example, and below, the identical X-ray scattering images are shown as obtained from the materials library at the stated spots from total amounts of substance in the µg range, proving that crystalline inorganic materials such as zeolites can be prepared and identified by the stated method.